

CPSC 8700 Final Game Project

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Execution

- To excute Holiday Invaders the python3 and the pygame library are needed.
- Depending on the local installation it may be best to run in a python virtual environment, venv.

```
$ python3 -m venv venv
$ source venv/bin/activate
$ python3 -m pip install pygame
$ python3 main.py
```

- Alternatively the HolidayInvaders.sh bash script will do the same as above in one command.

```
$ chmod +x HolidayInvaders.sh
$ ./HolidayInvaders.sh
```

Game Design

The idea for the game is a shooter game that will have players shooting at different holiday enemies.

We will have an abstract factory for creating the enemies that are in the game. A first iteration of the UML diagram for the design pattern can be seen below.

There will be a singleton pattern for the GameManager that will control the game operations. Making it a singleton pattern ensures that there is only one of these created.

Sound Attributions

Shooting_Sounds_003.wav by jalastram – <https://freesound.org/s/362455/> – License: Attribution 4.0

Hit 1 by NearTheAtmosphere – <https://freesound.org/s/676461/> – License: Creative Commons 0

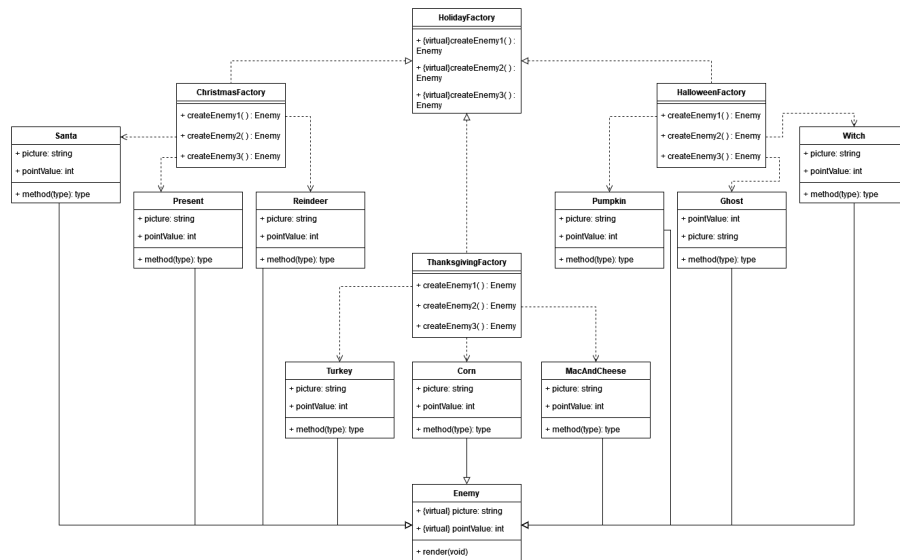


Figure 1: UML Diagram

Victory sting 5 by Victor_Natas – <https://freesound.org/s/741977/> – License: Attribution 4.0

8-bit Game Over Sound/Tune by EVRetro – <https://freesound.org/s/533034/> – License: Creative Commons 0

turkey gobble 03.wav by klankbeeld – <https://freesound.org/s/608325/> – License: Attribution 4.0

Sleigh Bells Sound Effect by GowlerMusic – <https://freesound.org/s/265458/> – License: Attribution 4.0

HalloweenGhost.wav by sound_system11 – <https://freesound.org/s/591511/> – License: Attribution 4.0

Code Attributions

pygame tutorials played a key role in learning the framework. Many thanks to the following. Pygame Tutorial with SpaceInvaders <https://github.com/educ8s/Python-Space-Invaders-Game-with-Pygame/blob/main/README.md>

Python Crash Course <https://learning.oreilly.com/library/view/python-crash-course/9781098156664/>